



Waste Management Plan for County Kildare

2005 - 2010

Executive Summary

Volume 1 of 4

Prepared for:

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REVISION CONTROL TABLE

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Abstract: A Waste Management Plan for Kildare County Council was prepared in accordance with the 1996 Waste Management Act. The Plan is valid for the period of 2000 - 2005. Section 22 of the Act requires that the Plan be reviewed at least once every five years. Kildare County Council has appointed FTC to prepare this Waste Management Plan for the period 2005 - 2010.

Kildare is not a member of any regional plan. The Plan assesses the various waste management options available to Kildare County Council. The Plan also assesses progress to date in the implementation of the 2000 – 2005 Waste Management Plan. It outlines specific goals and targets as well as the infrastructure that will be required for County Kildare to meet European and National waste targets.

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1. INTRODUCTION

A Waste Management Plan for Kildare County Council was prepared in accordance with the 1996 Waste Management Act. The Plan is valid for the period of 2000 - 2005. Section 22 of the Act requires that the Plan be reviewed at least once every five years.

1.1. Need for a Waste Management Plan

Waste management planning is required by law. In addition it is Government Policy that an integrated approach is taken when drawing up a waste Plan. An integrated approach means that the core elements of the Plan are made up of a number of specific components:

- public awareness and education including waste prevention and minimisation
- waste collection
- waste treatment including recovery and recycling
- waste disposal

The Plan provides for the period 2005 – 2010 and once adopted, this plan will supersede the 2000 – 2005 Waste Management Plan. The Plan will be reviewed at least once every five years in accordance with the 1996 Waste Management Act.

The 2005 - 2010 Plan identifies waste management solutions which shift the emphasis from disposal to prevention, minimisation, recycling, recovery and other forms of waste treatment.

1.2. Diversion Targets

The principal aim of this Plan is to promote waste prevention and minimisation through source reduction, producer responsibility and public awareness. The objectives of the this Plan must also ensure that EU and National waste management policies can be met.

A number of recycling/recovery and diversion targets have been set which each EU Member State is required to meet. These are:

- Landfill Directive biodegradable waste diversion target
- Changing Our Ways targets (national policy document based on EU targets)
- Packaging Waste targets

1.2.1. Landfill Directive Biodegradable Waste Diversion (from landfill) targets

- diversion of 25* % biodegradable waste from landfill by 2006
- diversion of 50* % biodegradable waste from landfill by 2009
- diversion of 65* % biodegradable waste from landfill by 2016

*The target is based on 1995 waste arisings of biodegradable waste. In 2006 only 75 % of 1995 levels should be landfilled

1.2.2. Changing Our Ways Targets: 1998 - 2013

- a diversion of 50 %* of overall household waste away from landfill by 2013
- a minimum of 65 %* reduction in biodegradable waste consigned to landfill by 2013
- recycling at least 35 %* of all municipal waste by 2013

1.2.3. Packaging Directive (94/62/EC)

The Packaging Directive sets the following targets in respect to packaging waste i.e. bottles, cans, cardboard etc

- 25 % recycling rate of packing waste by 2001
- 15 % minimum recycling rate for each material by 2005
- 25 – 45 % recycling rate for packaging waste 2005
- 50 – 65 % recovery rate for packaging waste 2005
- 60 % of packaging waste recovery or incineration
- 55 – 80 % packaging waste recycling
- recycling targets for each packaging material: glass 60 %; paper and board 60 %; metals 50 %, plastics 22.5 %; wood 15 %

Table 1.1 details the type of infrastructure will which need to be established in County Kildare to enable the County to meet these relevant recycling/recovery and diversion targets:

Table 1.1: Infrastructure Required within the County to Meet Targets

Target	Deadline	Infrastructure Required to Meet Targets
<i>Landfill Directive:</i> compliance with 25 % target (2006)	2006	three-bin collection system material recovery facility(s) biological treatment facility(s) residual landfill
<i>Landfill Directive:</i> compliance with 50 % target (2009)	2009	three-bin collection system material recovery facility(s) biological treatment facility(s) residual waste treatment facility(s) residual landfill
<i>Landfill Directive:</i> compliance with 65 % target (2016)	2013	three-bin collection system material recovery facility(s) biological treatment facility(s) residual waste treatment facility(s) residual landfill
<i>Changing Our Ways:</i> 35 % recycling of municipal waste	2013	three-bin collection system material recovery facility(s) biological treatment facility(s) residual landfill
<i>Changing Our Ways:</i> a diversion of 50 % of overall household waste away from landfill	2013	three-bin collection system material recovery facility(s) biological treatment facility(s) residual landfill
<i>Changing Our Ways:</i> a minimum of 65 % reduction in biodegradable waste consigned to landfill	2013	three-bin collection system material recovery facility(s) biological treatment facility(s) residual waste treatment facility(s) residual landfill

1.3. Waste Forecasts

The growth forecast of waste arisings over the period of this Plan is based on the growth factors outlined in the National Overview of Waste Management Plans, and as outlined in Table 1.2.

Table 1.2: Waste Forecasts – Predicted Annual Percentage Increase for Waste Arisings (2005 – 2026)

Waste Stream	2005	2006	2007	2008	2009	2010	2011 - 2025	Total Increase 2005 – 2025
household	6.3 %	6.0 %	3.5 %	3.4 %	2.7 %	2.3 %	30.0%	54.2
commercial/industrial	4.4 %	4.3 %	2.1 %	2.2 %	1.6 %	1.3 %	30.0 %	45.9

2. WASTE MANAGEMENT WITHIN THE COUNTY

This section addresses the following areas:

- reported waste arisings for County Kildare
- existing and proposed waste management Infrastructure
- waste management initiatives within the County

2.1. Reported Waste Arisings

Table 2.1 outlines the reported waste arisings for the County in 2003.

Table 2.1: Summary of Report Waste Arisings

Waste Stream	Reported Waste Arisings 2003	Hazardous Waste Component
household	62,636	1,253
commercial	70,178	
industrial	160,886*	2,143
litter/street cleansing	1,631	
healthcare (non-hazardous)	10,561	
healthcare (hazardous)	271	271
sewage sludge	14,300	
Hazardous Waste (C1 & TFS)	9,003	9,003
water treatment sludge	12,000	
non-hazardous industrial sludge	32,240	
agricultural waste	700,820	
Total Waste	1,065,523	3,667
packaging waste	65,204**	
waste electrical and electronic equipment	1,475 – 2,950	
batteries	148	148
end-of-life vehicles (No.)	2,000	
polychlorinated biphenyls	0	
construction and demolition (C&D)	1,900,000***	18,000
waste oil	531	531
tyres	1,439	1,439
household hazardous waste	1,252	1,252

* includes offal & hazardous waste

** calculated as a percentage of household, commercial and Industrial waste

*** includes 1,348,000 tonnes imported into the County (mostly soil); approximately 30 % of material (552,000 t) managed in the County was generated in Kildare in 2003

**** calculated as 2 % of total household waste arisings

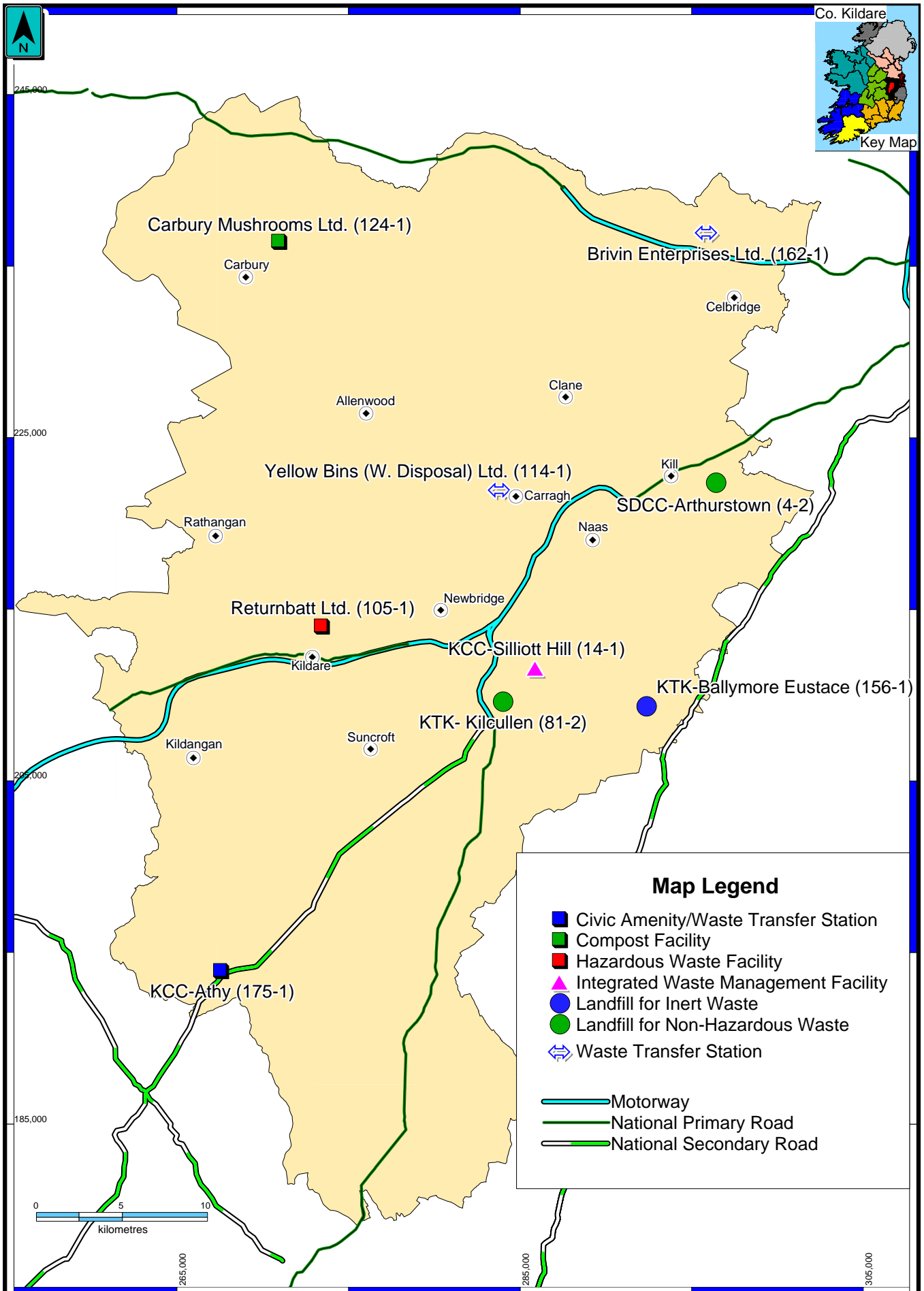
2.2. Development of Waste Management Infrastructure

Kildare County Council has made significant progress over the period 2000 – 2005 in implementing the Waste Management Plan. This work included the upgrading and establishment of waste management infrastructure throughout the County. In summary, the major developments have been as follows:

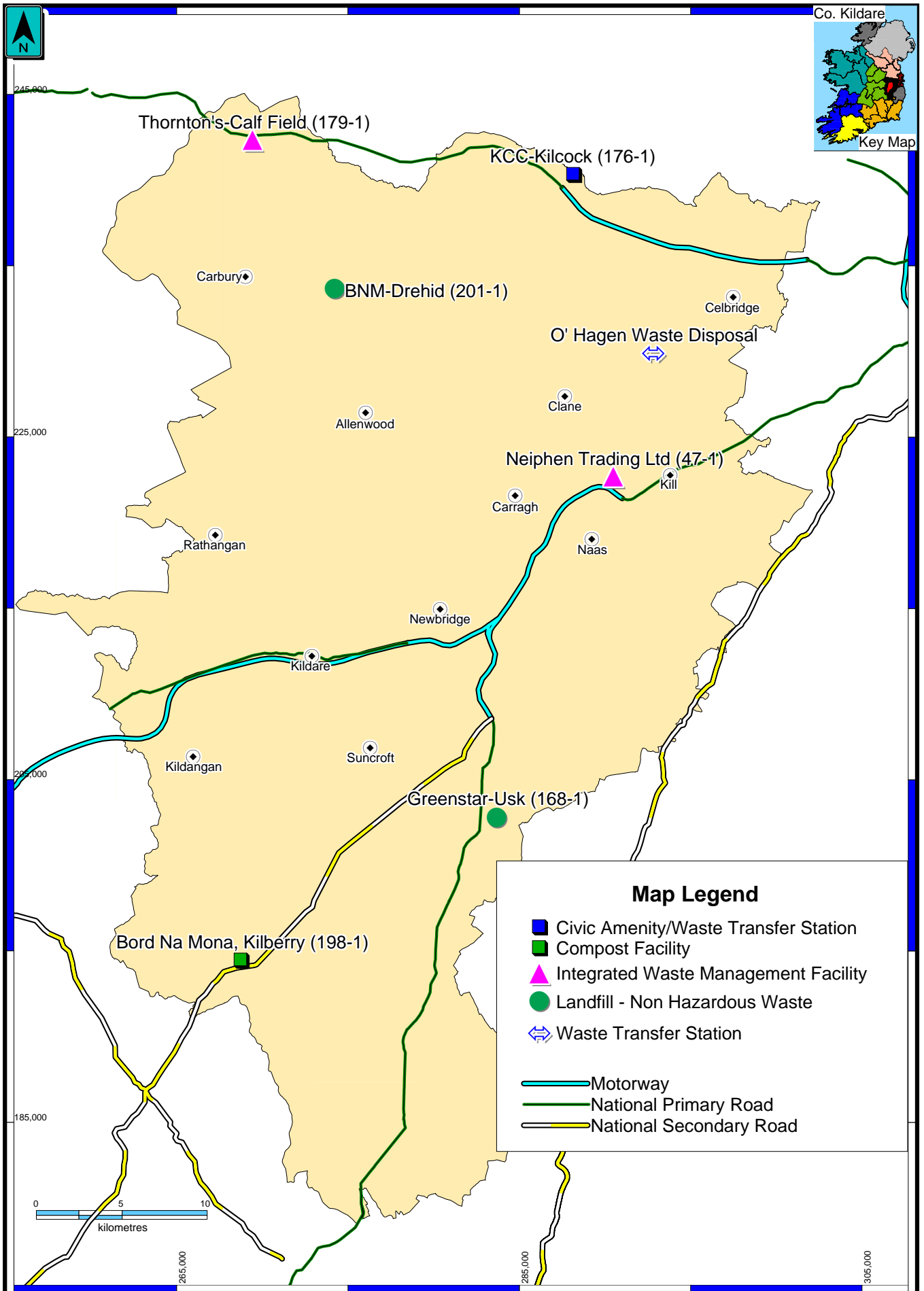
- Closure of Silliot Hill Landfill Site and development of a restoration and aftercare plan for the facility.
- Licensing of Silliot Hill by the EPA as an integrated waste management facility.
- Establishment and commissioning of two biological treatment facilities at Silliot Hill.
- Establishment of a temporary transfer facility at Silliot Hill.
- Finalisation of medium-term arrangements for the final disposal of collected household waste. Silliot Hill Landfill reached its design capacity in March 2002, and consequently has ceased to accept waste for disposal by landfill. Since then, the Council has constructed a waste transfer station at Silliot Hill which transports all the Council's domestic waste to Thornton's Recycling Ltd. in Dublin for baling, followed by subsequent disposal at Arthurstown landfill site.
- Commissioning and submission of a report on the site selection process for a new local authority residual landfill site. There have been a number of proposals from private operators which are currently going through the statutory processes of planning and licensing. Thus, a final decision from Kildare County Council on the provision of a new facility is being continuously evaluated in the context of proposed private development.
- Roll-out of a two-bin collection and pay-by use charges to all local authority customers. Private operators serve an estimated 25,000 households including Athy and Naas town Councils. A number of private collectors have also introduced a two-bin system.
- The acquiring of waste licences for civic amenity sites at Kilcock and Athy and the opening of Athy Civic Amenity.
- Increasing the density of bring sites throughout the County to 40.
- Review of expression of interests for a Material Recovery Facility (MRF).

2.2.1. Proposals for New Facilities within the County

Since 2002/2003, a significant change has occurred in the approach to waste management by private sector companies in County Kildare. A number of applications for large scale waste management infrastructure have been submitted to the EPA and Kildare County Council. Figure NTS 2.1, overleaf, details the locations of existing waste management facilities in the County. Figure NTS 2.2 details the proposed waste management infrastructure for County Kildare. These also are given in Table 2.2.



Existing Waste Management Infrastructure



Proposed Waste Management Infrastructure

Table 2.2: Proposals for New Private Facilities in County Kildare

Location of Facility	Name of Operator	Facility Type	Status of Application	Residual Disposal Capacity
Straffan	O' Hagan Waste Disposal	Transfer Station	The site is permitted. A planning application for an extension has been submitted.	N/A
Usk, Dunlavin	Greenstar	Landfill	180,000t of non-putrescible, non-hazardous commercial, industrial & residual municipal waste 20,000 tpa of C&D for recovery. Site has been licenced but is awaiting a decision from An Bórd Pleanála regarding planning.	2 m t over 10 years
Calf Field	Padraig Thornton Waste Disposal Limited	IWMF*	An application for dry recyclables sorting facility, bio diesel facility, wood recycling, tyre treatment, end-of-life vehicle processing facility & residual landfill (220,000 tpa). Have received a PD licence for the facility but have been refuse planning permission by An Bórd Pleanála.	2.4 m t over 12 years
Drehid	Bord Na Móna	Landfill & Biological	An application for a residual landfill (120,000 tpa) & biological treatment facility (25,000 tpa) The site has received a licence and planning permission.	2.3 m t over 20 years

2.2.2. Residual Waste Disposal Capacity within the County

As shown in Table 2.2 the proposed capacity for residual waste disposal in the County is approximately 5.2 m t over the next 10 years, and 1.6 m t for 10 years thereafter. This represents disposal capacity for residual MSW. It is difficult to calculate capacity for residual household waste only. From the information available it seems that there is greater capacity for residual commercial than residual household waste.

Table 2.3 is a list of existing facilities in County Kildare that accept residual waste.

Table 2.3: Existing Facilities within the County

Name of Facility	Operator	Facility Type	Waste Type	Licenced	Annual Waste Input (Tonnes)	Current Status	Capacity & Expected Closure
KTK Sand & Gravel Limited, Kilcullen	Greenstar	landfill	commercial, industrial & C&D	licenced ref. no. 81-1	275,000	active	~230,000 t 2005/6
Neiphin Trading	Neiphin Trading Ltd	IWMF	construction & demolition, commercial & industrial	licenced ref. no. 47-1	183,000 (landfill)	in planning process	not available
*Arthurstown	South Dublin County Council	landfill	domestic commercial	Licenced ref. no 4-3	600,000	active	900,000 t December 2007

*Arthurstown is in County Kildare but is operated by South Dublin County Council. A portion of waste generated in Kildare is currently disposed of in Arthurstown. The remaining capacity of 900,000 t is owned by SDCC and only a portion will be used by KCC.

2.3. Waste Management Initiatives

Section 4 of the 2000 – 2005 Waste Management Plan for County Kildare outlined a number of policy actions/targets for the period of the Plan. There has been some significant progress in realising a number of key objectives of the Plan. These are summarised in Table 2.4

Table 2.4: Kildare County Council Waste Management Initiatives

Area	Implemented Initiative
Waste Prevention	<ul style="list-style-type: none"> • employment of Environmental Awareness Officer • establishment of school education programme which involves: <ul style="list-style-type: none"> ○ visits to all schools to raise public awareness ○ school visit to Silliot Hill Integrated Waste Management Facility ○ promotion of the Green Schools programme • establishment of community programme which involves: <ul style="list-style-type: none"> ○ promotion of National Spring Clean ○ promotion of National Tree Week ○ promote community composting projects ○ assist communities in receiving grants from various bodies • establishment of business education programme
Waste Minimisation	<ul style="list-style-type: none"> • distribution of 6,000 home composting bins • establishment of an internal waste management plan for the Civic Offices • employment of a Waste Packaging Enforcement Officer
Recovery/Re-use	<ul style="list-style-type: none"> • completion of Athy Civic Amenity Site • licensing of Kilcock Civic Amenity Site • upgrading of Silliot Hill Civic Amenity Site
Recovery/Recycling	<ul style="list-style-type: none"> • roll-out of two-bin collection system to all County Council customers • expansion of bring banks to 40 • review of waste collection permits to include pay-by-use • employment of a Packaging Enforcement Officer, whose role includes ensuring that all major producers are either participating in a recovery scheme operated by an approved body (Repak being the sole approved body) or are self-complying with the local authority.
Energy recovery	<ul style="list-style-type: none"> • installation of landfill gas utilisation at Silliot Hill Integrated Waste Management Facility, for the generation of electricity
Litter Management	<ul style="list-style-type: none"> • support for local clean up campaigns • assisting local groups in the Tidy Towns and Pride of Place competitions • establishment of a litter education programme for both primary and secondary schools • expenditure of € 3.5 -4 m on street cleaning over the period of the Plan
Sludge Management	<ul style="list-style-type: none"> • implementation of Sludge Management Plan • tendering for the construction of a sewage sludge treatment facility at Osberstown

3. NECESSARY COMPONENTS OF THE PLAN

3.1. Recommended Strategy

The recommended strategy to be implemented by the Plan is an integrated scenario with the following components:

- home composting
- three-bin collection system – the three bins are for dry recyclables (paper/cardboard, metal and plastic), organic/green wastes, and for residual wastes (anything that cannot be placed into the dry recyclables or organic bins)
- network of bring banks and civic amenity sites
- transfer station(s)
- biological treatment facility(s) for the treatment of organic waste (food and garden) to form compost which can be re-used beneficially
- dry material recovery facility(s) for the recycling/recovery of recyclable material in a dry material recovery facility - sorting and picking lines separate the waste into paper, cardboard, metals and plastic fractions
- mechanical-biological treatment facility(s) for the treatment of the residual bin, which is a mixture of organic waste and recyclable materials - recyclables can be recovered/recycled from sorting and picking lines, and the remaining waste is then composted
- residual landfills(s) for material that cannot be recycled, and for material which is rejected from a biological treatment facility, dry material recovery facility or mechanical-biological treatment facility

The specific policy for the Kildare County Council is summarised below as follows:

- public awareness and education
- waste collection and charging
- waste recovery and recycling
- market development
- waste treatment
- final disposal
- energy recovery from waste
- litter preventions
- sludge management
- National Hazardous Waste Management Plan
- priority waste streams
- illegal landfilling and unauthorised site
- location of waste management facilities
- location of facilities requiring a waste permit

For this section, municipal waste refers to the household waste as well as commercial and other waste which, because of its nature or composition, is similar to household waste.

3.1.1. Public Awareness and Education

Raising information and awareness levels in all sectors of the community helps promote:

- waste minimisation
- source reduction
- producer responsibility

To assist in achieving these requirements, the following initiatives will be encouraged during the period of this Plan:

- roll-out of new collection schemes and methods
- increasing and maintaining public participation in recycling initiatives etc.
- information on the establishment of the necessary waste management infrastructure
- Community Environmental Education Programme
- Business Environmental Education Programme - this involves liaising with businesses to assist them in minimising waste and maximising recycling capabilities.
- enhancement of information provided by Council through website, use of libraries to stock information leaflets and use of other media, e.g., local radio.
- the Council will develop a public information campaign for broadcast on local radio. This campaign will have particular emphasis on waste prevention and minimisation techniques.
- the Council will explore the possibility of developing a regular environmentally themed programme on local radio where waste management issues could be addressed as required
- a major initiative which Kildare County Council will undertake is the establishment of a green town within the County

These initiatives will apply to both the public and private sector.

3.1.2. Prevention and Minimisation

It is the specific policy of the Council to:

- ensure Kildare County Council acts as a model of best practice in waste prevention and minimisation in the new Civic Offices
- Appoint a Green Business Officer to support and co-ordinate waste prevention/minimisation initiatives with local business and industry
- advocate improved procurement policies within industry and other sectors
- work closely with the business sector to minimise packaging waste
- liaise with the Clean Technology Centre to advise industry on best practice with regard to waste prevention and minimisation
- continue the Shoppers Awareness campaign - this highlighted to shoppers the benefits of reducing packaging waste
- actively support local organisations in developing repair and/or re-use facilities
- promote community composting with community groups - this will minimise green waste arisings being consigned to landfill

3.1.3. Waste Collection and Charging

To facilitate recovery/recycling of waste, a multiple bin collection system is necessary:

- During the period 2005 - 2006, a two-bin collection system will be put in place serving all households. In a two-bin system, dry recyclables (plastic, paper/cardboard, metal cans) are put in one bin; the remaining (residual) waste is put in the other. Proposed apartment and housing developments will be required to be appropriately laid out to enable the implementation of three-bin collection systems
- Post-2006, a three-bin system for householders will be put in place. In a three-bin system, the organic waste is put in a separate bin, dry recyclables in another and residual waste in the remaining bin.

- Post-2006, a three-bin collection system will be put in place for commercial and industrial facilities.
- All collectors will be required to operate a pay-by-use system.

To Council will embark in an intensive public awareness campaign for the roll out of the two-bin and three-bin systems in conjunction with the private sector. This will include information on the correct segregation of waste, information on bin collections, and arrangement for public holidays.

3.1.4. Waste Recovery and Recycling

The following recovery/recycling facilities are necessary:

- Home composting in County Kildare has exceeded the National target of 7 % household participation. It will be the policy of the Council that home composting will continue to be promoted. Home composting is how your organic kitchen waste is composted in a special bin at home.
- The Council will provide or arrange for the provision of bring centres with the emphasis on quality of location, and presentation and range of receptacles. In particular, the Council will examine the feasibility of more creative location/design. For example, this could include underground facilities, security systems, public information for local points, etc. The Council will keep under review the density of sites per thousand of population, and the collection frequencies of the enhanced bring sites. In particular, the Council will consider locations in the control of other public authorities such as hospitals and health centres, with the approval of those authorities.
- A minimum of three civic amenity sites will be provided in or adjacent to primary/secondary dynamic clusters (as identified in the Regional Planning Guidelines for the Greater Dublin Area). Civic amenity sites are facilities that enable the public to bring their recyclables, in particular, the bulkier items (like white goods, garden trimmings, timber, cardboard, etc.). They usually provide facilities for waste oils, batteries and other household hazardous items as well.
- Local biological treatment systems for commercial/industrial organic waste streams will be provided over the period 2005 - 2009. These could be anaerobic with energy recovery or aerobic (composting) systems.
- Material recovery facilities will be established in the County for the recovery of dry recyclables from the domestic and/or commercial/industrial sector. In a dry recyclables materials recovery facility, paper, cardboard, plastic and metal cans are separated and baled for recycling.

3.1.5. Market Development

A fundamental element of waste re-use and recycling is the availability of markets for recyclable and recycled materials. Market development will be encouraged through public education campaigns and the implementation of legislative tools.

The Council will consult with the National Market Development Group for recycling markets and assist, where appropriate, with the roll-out of suitable initiatives. Kildare County Council will continue to assess new recycling markets, and convey its findings to the National Market Development Group.

3.1.6. Waste Treatment

Source-segregated waste needs to be treated in the most appropriate manner to optimise recovery, recycling and re-use. Waste treatment is dealt with under the following headings:

- organic waste
- green/garden waste
- materials recovery facilities

Organic Waste

- the Council will have due regard to developments in adjoining waste management regions
- promote the provision of biological treatment facilities by the private sector
- encourage the provision of local biological treatment facilities for agricultural wastes throughout the County
- provision/promotion of home composting systems for household organics
- provision/promotion of a minimum of three civic amenity sites

Green Waste/Garden Waste

Kildare County Council will provide/promote the use of green wastes as amendment material in biological treatment facilities.

Materials Recovery Facilities

Kildare County Council will:

- promote development by the private sector of materials recovery facilities for dry recyclables
- the Council will have due regard to development in adjoining waste management regions

3.1.7. Final Disposal

The Plan recognises that most waste for final disposal in County Kildare is sent to landfill at present. Thus, in accordance with the Landfill Directive, wastes for landfilling will be pre-treated, where that is a requirement of the Directive.

It is not Kildare County Council's intention to directly provide its own landfill site within the County during the lifespan of this Plan, having regard to the following:

- the status of proposed new waste management facilities in County Kildare and neighbouring Counties
- pending the outcome of planning and licensing processes

This situation will be kept under review.

In the short term, Kildare County Council has access to sufficient landfill capacity for the waste that is subject to its control. This is subject to there being no unforeseen problems with the availability of existing disposal facilities. In the medium to long term, Kildare County Council will consider alternative arrangements for the disposal of residual waste in co-operation with neighbouring regions and/or the private sector.

The status of existing and proposed waste management facilities will be reviewed as necessary, and at least every two years.

3.1.8. Energy Recovery from Waste

The Council encourages the extraction of the maximum economic value from biological and residual waste streams. To achieve this, the Council will:

- provide/promote the beneficial re-use of landfill gas
- provide/promote the beneficial re-use of energy from biological treatment systems

3.1.9. Litter Prevention

Kildare County Council adopted the latest revision of its Litter Management Plan in 2003. This Plan incorporates the key policy of the Litter Management Plan, enforcing the five key areas of:

- education and information
- litter prevention and control
- enforcement
- community involvement
- recycling and recovery

The Council will provide for street cleansing throughout the County.

3.1.10. Sludge Management

Kildare County Council adopted a Sludge Management Plan for the County in 2001. The Plan identified the need for the development of a hub centre for the treatment of sewage sludge within the County. A site has been selected at Osberstown. This project is currently at tender stage and construction is expected to commence in 2005. The Council is also considering arranging co-operative measures with other Local Authorities in relation to management of sewage sludge disposal.

3.1.11. National Hazardous Waste Management Plan

The Council will play its part in the national effort to eliminate the small proportion of "unreported" hazardous waste.

The Council will also seek to ensure that household hazardous waste is managed correctly. To this end, the Council will provide facilities at its three civic amenity sites for the collection and storage of household hazardous waste, prior to its disposal or treatment at other facilities. The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review.

Kildare County Council will fulfil its mandate under the National Hazardous Waste Management Plan and prepare a Section 26 Register. This is a register of sites with known or suspected historic disposal of hazardous waste. This is outlined in more detail in Volume 2 of this document.

3.1.12. Priority Waste Streams

The following priority waste streams are as follows:

- packaging waste
- healthcare waste
- waste electrical and electronic equipment
- polychlorinated biphenyls
- end-of-life vehicles
- batteries
- construction and demolition waste
- tyres
- waste oil

Packaging Waste

The Council will work closely with Repak Ltd. to ensure that the quantity of packaging required by the Packaging Regulations and the EU Directive is recycled within the required timescales. This will be achieved by providing information to all packaging producers in the County on the need for compliance with the Packaging Regulations and with a view to increasing packaging waste recovery. This information will also include material on the prevention of the creation of packaging waste.

Healthcare Waste

Non-Hazardous Healthcare Waste

- it is the specific policy of the Council that as far as practicable and subject to an analysis of associated risk, that all non-hazardous waste streams from residential/healthcare facilities, will be source separated into the three primary components of dry recyclables, organic waste and residual waste
- healthcare waste will be collected by appropriately permitted collectors
- the Council will liaise with the Health Authorities with regard to facilities for collection and recovery of selected waste streams
- in conjunction with the Health Authority, the Council will examine the treatment of non-hazardous, source-separated food waste from healthcare facilities, at Silliot Hill or other appropriate facilities; the Council will subsequently promote its beneficial re-use
- the Council will consider locations for bring centres in areas under the control of other public authorities such as hospitals and health centres, with the approval of those authorities

Hazardous Clinical Waste

- the Council will enforce the management of hazardous clinical waste in accordance with the National Hazardous Waste Management Plan, published by the EPA
- hazardous clinical waste should be collected by appropriately permitted collectors

Waste Electrical and Electronic Equipment

The Council will promote the achievement of the recovery rates set out in the Waste Electrical and Electronic Equipment Directive (2002/96) as follows:

- the Council will ensure that all civic amenity sites have provision for the recovery of WEEE (noting that the return of electronic and electric goods by householders is free of charge under the Directive).
- the Council will engage in a public awareness strategy to achieve the target set out by the Directive of an average of 4 kg of waste electrical equipment to be collected from each private household per year by January 2006

Polychlorinated Biphenyls

The Council will enforce the Waste Management (Hazardous Waste) Regulations 1988 to satisfy the requirements of the Polychlorinated Biphenyls Directive (96/59).

- the Council will take measures to ensure that premises in which polychlorinated biphenyls (PCBs) are stored are appropriately labelled to alert emergency services to their presence, in case of accident or fire
- through its functions in relation to the C1 and TFS Regulations, the Council will ensure that premises falling under the Regulations will dispose of PCBs to appropriate facilities
- the Council will enhance awareness of the Regulations of the Directive and the requirements of the EPA's Management Plan for Polychlorinated Biphenyls (PCBs)

End-of-life Vehicles

The Council will promote the establishment of authorised facilities for the processing of end-of-life vehicles, and enforce the waste permits to run such facilities.

The Council will regulate dismantling facilities to ensure that they are authorised and meet certain environmental performance standards, and defined recycling levels as set out in the End-of-life Vehicle Directive (2000/53).

Batteries

The Council will:

- enforce the requirements of existing and proposed Directives
- continue to support the schools battery recycling scheme
- promote the provision of drop-off points for batteries at collection facilities
- promote focus-based awareness and education initiatives on the hazards associated with batteries

Construction and Demolition Waste

The Council will promote the provision of mobile crushing and screening systems located at existing/proposed waste facilities, where practicable. The Council will also promote and raise awareness of the Voluntary Industry Initiative for increasing minimisation and recycling rates for construction and demolition waste.

The Council will also promote and encourage quarry operators and large construction sites to develop temporary recycling facilities where possible. The Council will review the types of waste which are collected at civic amenity facilities within the county and may include the recovery of rubble and stone from householders if it is economical to do so.

Tyres

The Council will:

- have regard to the Landfill Directive whereby shredded tyres will no longer be accepted for landfilling post 2006
- permit and enforce the permits of tyre collectors to ensure the tyres are appropriately managed from source to final disposal/re-use
- provide education and awareness of the requirements for disposing of tyres to householders, the agricultural sector and, in particular, to commercial garages and tyre repair outlets

Waste Oil

- the Council will provide suitable receptacles for waste oil at Kilcock and Athy Civic Amenity Centres
- waste oil will be collected by appropriately permitted collectors

3.2. Illegal Landfilling and Unauthorised Sites

Kildare County Council will continue to liaise with the EPA's Office of Environmental Enforcement. The Agency has established a working group, which is currently developing a "Complaints Investigation Protocol" on waste-related issues. It will be the policy of the Council to implement the Protocol.

From the outset, Kildare County Council has been represented on the National Working Group for Unauthorised Waste activities. Kildare County Council has appointed a dedicated person for dealing with queries in this regard.

Nationally, unauthorised waste management activities and contaminated sites have proven a difficult area to police from a range of perspectives, including legal, geographical and administrative perspectives. Kildare County Council has engaged in this process and has identified a number of sites.

In relation to unauthorised waste management activities and contaminated sites, Kildare County Council will have regard to:

- the policy direction issued by the Minister of Environment, Heritage and Local Government on the 3rd May 2005
- the EC Court of Justice judgment dated the 26th April 2005 against Ireland in relation to the Waste Directive 75/442/EEC as amended by 91/156/EC

The policy direction issued by the Minister requires that each local authority:

- prepare an inventory of sites at which waste disposal and recovery have been carried on
- carry out an initial risk assessment of each of these sites (i.e. walkover survey)

Kildare County Council has commenced this process.

In response to the policy direction referred to above, the EPA will be preparing a Code of Practice for assessing the risk presented by such sites. It will be the policy of the Council to have regard to the Code of Practice as developed by the Office of Environmental Enforcement.

It is the policy of Kildare County Council to investigate all reports concerning unauthorised waste management activities, including those relating to permitted facilities where waste disposal or recovery is taking place, unauthorised sites, unauthorised waste transportation and other breaches of the Waste Management Acts 1996 to 2003. In the period prior to National guidelines been published, Kildare County Council will implement the following procedure:

It is the policy of Kildare County Council to investigate all reports concerning unauthorised waste management activities, including those relating to:

- permitted facilities where waste disposal or recovery is taking place
- unauthorised sites
- unauthorised waste transportation
- other breaches of the Waste Management Acts 1996 to 2003.

Kildare County Council will implement the following procedure:

- an initial assessment will be undertaken by Kildare County Council of any such allegations of unauthorised waste activities
- depending upon a range of relevant factors, the nature and scale of the activity, its seriousness and environmental impact, whether a first-time or repeat offender is involved, and other relevant issues, enforcement action will be taken where necessary

It is the policy of Kildare County Council that all costs incurred in respect of investigations relating to proven unauthorised waste activities will be recovered from the landowner and/or operator of the facility.

If required, intrusive site investigations of unauthorised waste sites, as well as other contaminated land, will be conducted in accordance with BS 5930:1999 titled "Code of Practice for Site Investigations" and the "Guidance Notes for the Safe Drilling of Landfills and Contaminated Land" where required. This could include:

- an initial site walk-over/site history investigation to determine the waste material deposited at the site
- trial pit site investigation
- gas monitoring or probe survey at each trial pit
- collection of surface water samples
- collection of soil samples from each trial pit location
- chemical analysis of all samples obtained

It is the policy of the County Council that the environmental assessments/investigations carried out on behalf of the landowner will only be undertaken by a suitably qualified and experienced organisation. The appointment of such a body will be required to be subject to the approval of the County Council in the manner appropriate for each instance where it is necessary.

In accordance with Section 22(7)(h) of the Waste Management Acts 1996 to 2003, the following measures will be utilised to identify sites where waste disposal or recovery activities have been carried out in the past or which are otherwise contaminated. This identification process will also have regard to the Department of the Environment's Circular letter ENV 11/88, which is entitled "Identification of Waste Contaminated Land", and the relevant parts of the National Hazardous Waste Management Plan.

Details of sites known or suspected to have been used for the historic disposal of hazardous waste will be included in a "Section 26 Register". Once identified, the sites will be prioritised in accordance to the methodology set out in Chapter 7 of the National Hazardous Waste Management Plan. The implementation of the Section 26 Register will require significant additional staffing and financial resources.

Table 3.1 outlines the stages for the risk assessment of such sites.

Table 3.1: Hazardous Waste Management Plan – Methodology for Developing a Register for Hazardous Waste Disposal Sites

Stage 1	Develop a list of the industrial, commercial or agricultural activities most likely to have resulted in the generation of hazardous waste which would subsequently have required disposal either on or off-site.
Stage 2	Assess historical land-use with particular reference to the contaminative uses identified in Stage 1. This will require a desk study to identify the waste disposal activities likely to have been carried out and whether these took place on or off-site.
Stage 3	Identify which of the locations identified in Stage 2 are most likely to have been used for the disposal of hazardous waste.
Stage 4	Compile a Section 26 Register of all suspected or known hazardous waste disposal sites.
Stage 5	Carry out a preliminary risk assessment based on the desk study procedure in Stages 1 to 4. The assessment will allow suspect sites to be provisionally allocated to one of three priority categories (A, B or C) , thereby assigning each site included in the local authority register to a preliminary priority rating.
Stage 6	Undertake an intermediate risk assessment, based on a literature review and a visual inspection of the site. The results of this procedure will allow suspect sites to be re-allocated, as appropriate, to a more relevant priority category. The resultant priority rating will allow identification of those sites which must be subjected to Stage 7 investigations, as well as ranking them in order of priority.
Stage 7	Carry out a detailed risk assessment, based on actual site investigation work. Stage 7 investigations will verify the presence or absence of contaminants and will provide the information to be used in identifying an appropriate remediation strategy.

4. IMPLEMENTATION PROGRAMME

4.1. Key Actions for 2005 - 2010

In accordance with the National Policy document "Taking Stock – Moving Forward," Kildare County Council has set out key actions that are to be delivered in each of the Plan's five years. These are summarised below.

Year	Specific Task/Target
2005	<ul style="list-style-type: none"> • maintain national target of 7 % of households participating in home composting • increase number of Green Flags schools to 25 • open Athy Civic Amenity Site • increase number of bring bank sites to 45 • complete roofing of Waste Transfer Station at Silliot Hill • construct civic amenity site at Silliot Hill • provision of WEEE storage facilities at Silliot Hill and Athy Civic Amenity Sites • implementation of the Council Policy on unauthorised waste management activities and contaminated land • review of markets for recyclable materials • promotion of school tours to waste facilities • enforcement of the Packaging Regulations • review all waste collection permits issued in 2003 under the Waste Management (Collection Permit) Regulations • Implement the recommendations of the European Council and the EPA providing for Minimum Criteria for Environmental Inspections in Member states. • review the procedures used for issuing Waste Permits under the Waste Management (Permit) Regulations 1998 and to carry out inspections of all permitted facilities at least 8 times per year • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act
2006	<ul style="list-style-type: none"> • increase number of Green Flags schools to 30 • increase number of bring bank sites to 47 • optimise efficiency of emptying of recycling bin • Consideration by the County Council on the installation/upgrade of innovative bring facilities within the County. • launch public awareness information campaign for two-bin and three-bin system • develop a public information campaign for broadcast on local radio • develop bio-treatment facility at Silliot Hill • review status of proposed waste management facilities in the County with regard to recovery, recycling and disposal • review of markets for recyclable materials • promotion of school tours to waste facilities • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act • enforcement of the Packaging Regulations • review all waste collection permits issued in 2004 under the Waste Management (Collection Permit) Regulation 2001 • review all current waste legislation that requires resources in terms of enforcement • The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review. • Kildare County Council to consider the establishment of a "green town" initiative.

Year	Specific Task/Target
2007	<ul style="list-style-type: none"> • increase number of Green Flags schools to 33 • increase number of bring bank sites to 49 • review possibility of alternate weekly collection for refuse and recycling collections • review of markets for recyclable materials • promotion of school tours to waste facilities • enforcement of the Packaging Regulations • Consideration by the County Council on the installation/upgrade of innovative bring facilities within the County. • to review all waste collection permits issued (or reviewed) in 2005 under the Waste Management (Collection Permit) Regulations 2001 • The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review. • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act • construct and open Kilcock Civic Amenity Site • provision of WEEE storage facilities at Kilcock Civic Amenity Site
2008	<ul style="list-style-type: none"> • increase number of Green Flags schools to 35 • increase number of bring bank sites to 51 • complete roll-out of brown bin for organic waste to all Council refuse customers • review status of proposed waste management facilities in the County with regard to recovery, recycling and disposal • review of markets for recyclable materials • promotion of school tours to waste facilities • Consideration by the County Council on the installation/upgrade of innovative bring facilities within the County. • enforcement of the Packaging Regulations • to review all waste collection permits issued (or reviewed) in 2006 under the Waste Management (Collection Permit) Regulations 2001 • The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review. • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act
2009	<ul style="list-style-type: none"> • increase number of Green Flags schools to 37 • increase number of bring bank sites to 53 • review collection schedules for three-bin collections • review of markets for recyclable materials • promotion of school tours to waste facilities • enforcement of the Packaging Regulations • to review all waste collection permits issued (or reviewed) in 2007 under the Waste Management (Collection Permit) Regulations 2001 • The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review. • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act

Year	Specific Task/Target
2010	<ul style="list-style-type: none"> • increase number of Green Flags schools to 40 • increase number of bring bank sites to 55 • review status of proposed waste management facilities in the County with regard to recovery, recycling and disposal • review of markets for recyclable materials • promotion of school tours to waste facilities • enforcement of the Packaging Regulations • to review all waste collection permits issued (or reviewed) in 2008/2009 under the Waste Management (Collection Permit) Regulations 2001 • The provision of services such as dedicated/kerbside collection for household hazardous waste will be kept under review. • Implement Sections 22(7)(h) and 26(2)(c) of the Waste Management Act

4.2. Annual Report

Kildare County Council will prepare an annual report on the implementation of the proposed review. This report will assess the progress that has been made from year to year and highlight areas which need to be improved on.

GLOSSARY

A

Active Waste	Waste which will decompose in landfill sites.
Aerobic Decomposition	A type of biological decomposition that requires oxygen.
Anaerobic Decomposition	A type of biological decomposition that does not use oxygen.
Arisings	In relation to waste, sources of waste, e.g., industrial, agricultural, household etc.
Ash Residues	Ash from the combustion process. This can take the form of fly ash or bottom ash.

B

Biodegradable material	Materials that can be broken down by micro-organisms into simple, stable compounds such as carbon dioxide and water. Most organic materials such as food scraps and paper are biodegradable.
Bulking Agent	In relation to waste, a material used to add volume to the primary waste material to make it more porous, which increases airflow. For example, municipal solid waste can act as a bulking agent when mixed with water treatment sludge.
Bulky Items	Large items of waste, including appliances, furniture, larger auto-parts, non-hazardous construction and demolition materials, trees, branches and stumps, etc. that cannot be handled by normal solid waste processing, collection or disposal methods.
Bring Sites	Individual stand-alone receptacles within a neighbourhood civic amenity site, recycling bring scheme etc. For example, bottle bank, can bank, textile bank.

C

CAPEX	The capital expenditure or cost for the establishment of a facility or service, e.g., refuse trucks, thermal treatment facility, etc.
Capping	The top layer of a landfill, consisting of topsoil, subsoil, geomembranes and clay used to restore the landfill.
Civic Amenity Site (Civic Waste Facility)	Site at which waste can be deposited by members of the public for: i) the segregation, mixing, baling, storage or treatment of waste prior to its recovery or disposal ii) the recovery of waste iii) the disposal of waste (other than household)
Commercial Waste	Waste from premises used wholly or mainly for the purposes of a trade or business, or for the purposes of sport, recreation, education or entertainment, but does not include household, agricultural or industrial waste.
Co-mingled Recyclables	Two or more recyclable materials collected together (i.e., not separated). In some types of collection programs, recyclable materials can be co-mingled, as long as they do not contaminate each other. For example, glass and plastic can be co-mingled, but glass and oil cannot.
Compacting	Closely packing materials together to ensure an efficient use of space.

GLOSSARY cont'd

Composting	The controlled biological decomposition of organic solid materials.
Construction and Demolition Waste	Materials resulting from the construction, remodelling, repair or demolition of structures such as buildings, bridges, and pavements.

D

Disposal	In relation to waste, generally refers to the final, controlled deposition of waste to land (or sea), or permanent impoundment or storage, or incineration; such waste could have been treated or untreated.
Diversion Rate	The amount of material being diverted for recycling compared to the total amount that was previously disposed of to landfill.
Dry Recyclables	Recyclable material normally comprising paper, cardboard, plastics, and metal cans. Glass is handled separately for safety reasons.

E

End-Use market	A company that purchases recycled materials for use as feedstock in manufacturing new products.
Energy Recovery	Conversion of waste to energy, generally through the combustion or decomposition of processed or raw waste to produce electricity or heat.

F

Facility	In relation to the recovery or disposal of waste, any site or premises used for such purpose.
Flaring	The burning of surplus and residual gases from a landfill through a flame pipe.
Flue Gas	All gasses and products of combustion that leave a furnace by way of a flue or duct.
Fly-Tipping	Illegal dumping of rubbish in unauthorised places.

G

Gas control and Recovery System	A series of vertical wells or horizontal trenches containing permeable materials and perforated piping under negative pressure. The systems are designed to collect landfill gases for treatment or for use as an energy source.
Gate Fee	Cost per tonne of waste disposed to a waste facility.
Generation Rate	The amount of waste that is produced over a given amount of time. For example, a district could have a generation rate of 100 tonnes per day.

GLOSSARY cont'd

H

Hazardous Waste	Waste which can have a harmful effect on the environment and on human health.
Home Compost Scheme	Provision of home composting units to households (often free of charge or subsidised).
Household Waste	Waste produced within the curtilage of a building or self-contained part of a building used for the purposes of living accommodation.

I

Incineration	To burn waste materials, generally at high temperatures.
Incinerator	A facility in which solid waste is combusted.
Industrial Waste	Materials discarded from industrial operations or derived from manufacturing processes.
Inert Waste	Non-reactive wastes, e.g., rubble, brick, glass, etc.
Inorganic Waste	Waste composed of matter other than plant or animal (i.e., contains no carbon).
Integrated Solid Waste Management	A practice using several alternative waste management techniques to manage and dispose of specific components of the municipal solid waste stream. Waste management alternatives include source reduction, recycling, composting, energy recovery, and landfilling.
In-vessel Composting	A method in which compost is continuously and mechanically mixed and aerated in a large, contained area.

K

Kerbside or Separate Collection	Programmes in which recyclable materials are collected at the kerb (outside households), often from special containers, and then taken to various processing facilities.
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L

Landfill	A method of disposing of waste by burying in sites, licenced by the EPA, which have been engineered to prevent contamination of the surrounding area and water table; also refers to the sites used for such disposal.
Landfill Gas	A mixture of primarily methane and carbon dioxide that is generated in landfills by the anaerobic decomposition of organic wastes.
Landfill Tax	Tax on all waste entering landfills intended to encourage waste recovery.

GLOSSARY cont'd

M

Materials Recovery Facility (MRF)	A facility which recovers recyclable material from waste. A clean MRF is a facility which separates dry recyclables into separate recycling streams. A dirty MRF is a facility which separates both the dry recyclable fraction and the organic fraction of waste.
Mechanical Separation	The separation of waste into components using mechanical means, such as cyclones, trommels and screens.
Mechanical-Biological Treatment (MBT)	This is a form of treatment for mixed waste. It consists of a dirty MRF where recyclables are removed. The remaining waste is subjected to some form of composting (aerobic or anaerobic).
Methane	An odourless, colourless, flammable, explosive gas produced by municipal solid waste undergoing anaerobic decomposition. Methane is emitted from municipal solid waste landfills.
Municipal Solid Waste (MSW)	Waste from households, shops, offices and some industrial waste, generally handled by local authorities or large waste management firms.

O

OPEX	Operational costs associated with operating a facility or service.
Organic Material (Organic Waste)	Materials containing carbon. The organic fraction of MSW includes paper, wood, food scraps, plastics and yard trimmings.

P

Packaging	Any material, container or wrapping used for or in connection with the containment, transport, handling, protection, promotion, marketing or sale of any product or substance.
Participation Rate	Percentage of the population within a catchment area of a particular waste management facility or service, actually using that facility or service.
Prevention	The reduction of the quantity and of the harmfulness for the environment of waste products.

R

Recovery Rate	Percentage of usable material that has been removed from waste for re-use, recycling, or use for a new purpose.
Recycle/Re-use	Minimising waste generation by recovering and reprocessing usable products that might otherwise become waste (e.g., recycling of aluminium cans, paper bottles, etc.).
Recycling	The process by which materials otherwise destined for disposal are collected, re-processed, or re-manufactured, and are re-used.
Residue/Residual	The materials remaining after processing, incineration, composting, or recycling. Residues are usually disposed of in landfills.

GLOSSARY cont'd

Resource Recovery	A term describing the extraction and use of materials and energy from the waste stream. The term is sometimes used synonymously with energy recovery.
Re-use	The use of a product more than once in its same form for the same purpose, e.g., a soft drink bottle is re-used when it is returned to the bottling company for refilling.

S

Scrap	Discarded or rejected industrial waste material often suitable for recycling.
Sewage Sludge	Semi-solid and solid waste matter removed from sewage at sewage treatment plants.
Source Reduction	The design, manufacture, acquisition, and re-use of materials so as to minimise the quantity and/or toxicity of waste produced. Source reduction prevents waste either by re-designing products or by otherwise changing societal patterns of consumption, use, and waste generation. (See also, "Waste Reduction.")
Source Separation	The segregation of specific materials at the point of generation for separate collection. Households source separate recyclables as part of kerbside recycling programs.
Special Waste	Items that require special or separate handling, such as household hazardous wastes, bulky wastes, tyres and used oil.

T

Thermal Treatment	This term is generally taken to refer to incineration; on occasion, it is used as a generic term which also refers to gasification and pyrolysis.
Transfer Station	A permanent facility where waste materials are taken from smaller collection vehicles and placed in larger vehicles for transport to other waste facilities for recovery, treatment, or disposal.

W

Waste	An unusable or unwanted substance or material.
Waste Combustion	The combustion of waste in an incinerator to produce electrical or thermal energy. The waste can be sorted or non-sorted, and can also be processed before incineration.
Waste Management	Any systematic method of handling and disposing of waste.
Waste Minimisation	The re-design of a product to reduce or minimise both the amount of raw materials used and subsequent waste.
Waste Recovery/Stabilisation Facility (WR/SF)	This refers to a specific process involving removal of recyclable material at a materials recovery facility, and composting the organic waste to stabilise it. When the waste is stabilised it has a very low respiration or decay rate and therefore will produce little or no methane gas if landfilled.
Waste Reduction	Waste reduction is a broad term encompassing all waste management methods – source reduction, recycling, composting – that result in reduction of waste going to final disposal.

GLOSSARY cont'd

Waste Stream	A term describing the total flow of solid waste from homes, businesses, institutions and manufacturing plants that must be recycled, burned, or disposed of in landfills; or any segment thereof, such as the "residential waste stream" or the "recyclable waste stream."
Waste Water	Water that is generated, usually as a by-product of a process, that cannot be released into the environment without treatment.
White Goods	Large household appliances such as refrigerators, cookers, air conditioners and washing machines.
Windrow	A large, elongated pile of composting material, which has a large exposed surface area to encourage passive aeration and drying.